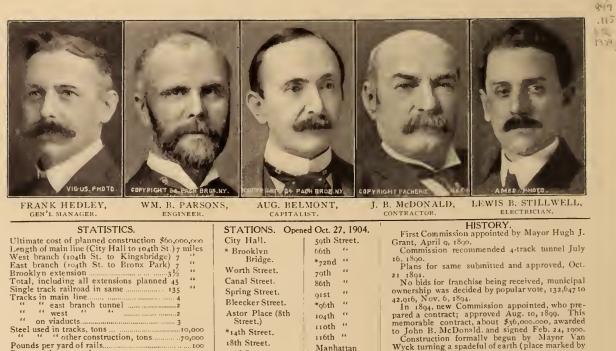


SEE BACK COVER



Street.

137th Street.

145th Street.

Stations.

* Express

23rd Street.

28th Street.

33rd Street.

42 nd St. and

50th Street.

Broadway.

*42d St. & Madison Ave.

Wyck turning a spadeful of earth (place marked by bronze tablet). Mar. 24, 1900.

Brooklyn Extension route (from City Hall via Broadway and tunnel at South Ferry) adopted Sept. 27, 1900.

Brooklyn Extension contract, \$3,000,000, signed Sept. 11, 1902.

Official inspection train, City Hall to Harlem, I D 1. 1004

Opened for public traffic, City Hall to 145th St., Oct. 27, 1904.

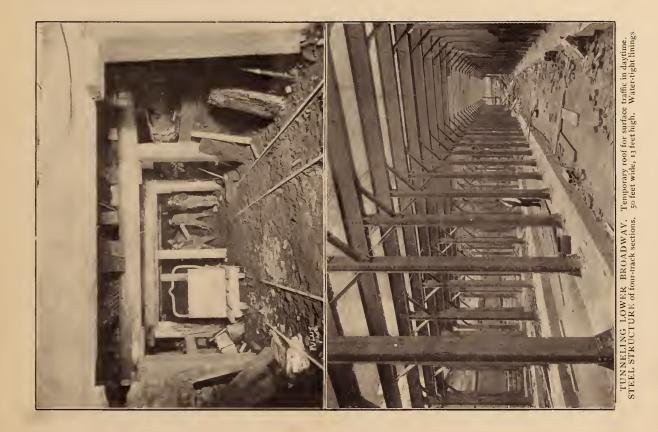
West branch (104th St. to Kingsbridge) 7 "
East branch (104th St. to Bronx Park) 7 "
Brooklyn extension
Total, including all extensions planned 45 "
Single track railroad in same 135 "
Tracks in main line 4
if if east branch tunnel
" " west " "
" on viaducts
Steel used in tracks, tons
" " other construction, tons
Pounds per yard of rails
Dynamos in power house
Capacity of each, kilowatts
Total horse power
Capacity coal bunkers, tons 25,000
Cost of power house and equipment \$7,000,000
Motors in 5-car-trains
Speed per hour, miles:
Local trains (5 cars)
Express '' (8 cars)

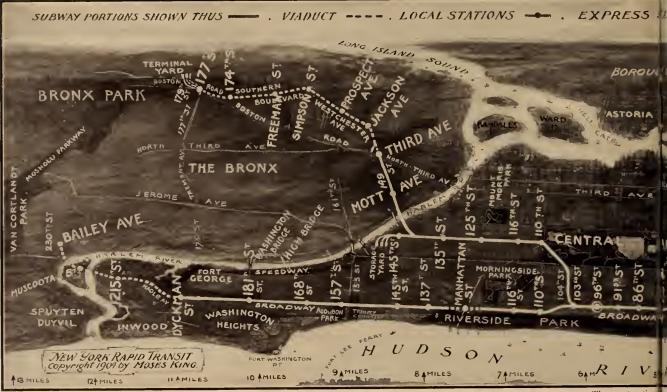


SIGNING THE MEMORABLE CONSTRUCTION CONTRACT FOR \$35.000,000, FEB. 24, 1900.—At head of table is Pres. A. E. Orr: at right, John B. McDonald, B. S. Coler, Mayor R. A. Van Wyck, Aug. Belmont, M. K. Jesup: at left J. H. Starin, W. Langdon, John Whalen: at end, C. S. Smith and Geo. L. Rives; standing, Wm. B. Parsons, R. A. C. Smith, B. L. Burrows, D. Nicoll, E. M. Shepard, Perry Belmont, etc.



CAPITALISTS' TRIP, JAN, 19, 1904. MANY MULTIMILLIONAIRES. REPRESENTING FOUR BILLIONS. Aug. Belmont, Geo. J. Gould. A. J. Cassatt, Jacob H. Schiff, James Speyer, Val. P. Snyder, George W. Young, J. D. Rockefeller, Jr., Frederick Cromwell, R. H. McCurdy, Cor. Vanderbilt, etc.





ROUTE OF THE GREAT SUBWAY RAILROAD IN ITS RELATION TO THE TERRITORY IT SERVES. INCLUDING UNFINISHED PARTS. The construction from Melrose Ave. to Bronx Park. All three open-air portions—a total of seven miles—are on viaducts of tasteful design. Fireproof steel cars. Passengers may r



me operating details throughout are of the highest order. The "tunnel" is in part open-air travel, from 123rd to 135th St. and all north of 194th St., and on east branch are '/ miles (including Brooklyn extension) for one five-cent fare. Daily north and south travel in Manhattan (all railroads) averages 900,000 passengers each way.







UNIVERSITY STATION BROADWAY AND 116TH ST. View North showing Columbia University. Vault lights over Subway; ventilation shaft inclosed in rathing, parkway over subway, surface cars, etc. Station decorated appropriate to University Subway steel car at left.

AVER



MANHATTAN VALLEY VIADUCT. FROM 123RD to 135TH STREET. STATIONS BUILT BY HECLA IRON WORKS OF BROOKLYN. The Great Arch at Manhattan St. spans 170 ft. Tracks 50 ft. high. Otis Escalator, capacity 20,000 passengers an hour, at the Manhattan St. Station.

New York's Subway Rapid Transit: The Underground Railway

SEYMOUR DURST

The completion of the "subway" or underground rapidtransit system marks one of the greatest of human achievements. Discussed for many years and repeatedly pronounced impracticable, the courage, skill and energy of a few men have conquered all obstacles, and the accomplished fact challenges universal wonder.

The financial problem, involving upwards of \$50,000,000, was met by municipal ownership, approved by popular vote. To avoid infringement of individual property rights required the highest legal talent. Engineering and construction difficulties were successfully met. Danger to abutting buildings had to be considered at every step. Besides dealing with innumerable gas and water pipes, electrical conduits and pneumatic tubes, long sections of sewers and pipes required moving, rebuilding and grade-al eration. Quicksands and underground streams were encountered. Solid rock in great stretches had to be blasted. Miles of electrical street railways were undermined without accident or the stoppage of a car. The Columbus monument at 59th Street, weighing 724 tons, presented extraordinary difficulties, but remains as stable as if solid rock still stood beneath it.

The route of the Rapid Transit Subway is: 1. From City Hall (Brooklyn Bridge) north on Elm Street and Lafayette Place to 4th Avenue, at 8th Street; up 4th Avenue to 42nd Street; west to Broadway; then north on Broadway, 11th, Naegle and Amsterdam Avenues to Kingsbridge. 2. At Broadway and 104th Street begins the east branch: East to Central Park, under the Park to 110th Street and Lenox Avenue, north on Lenox Avenue to 141st Street, then east, under Harlem River, to and through Bronx Borough, ending at Bronx Park. 3. Extensions north are planned; and an extension south to Brooklyn is now well under construction. The portion opened to the public October 27, 1904, is that from City Hall north to 145th Street.

The cars (lighted by electrivity) are propelled by the thirdrail electric system. Speed will average 16 miles per hour for local (5-car) trains, and 25 to 30 miles per hour for expresses (8 cars). The power-house, at 11th Avenue and 59th Street, is the largest in the world. It covers an entire block, 700 x 200 feet, double the size of the plot of Madison Square Garden. There are six smoke-stacks, 265 feet high, and nine 8,000-horsepower engines, driving dynamos of enormous capacity. Coalbunkers, distributed overhead in the boiler-room, can store 25,000 tons, a month's supply.

The construction of a work so vast in 41/2 years is unprecedented. The first spadeful of earth was turned at City Hall by Mayor Robert A. Van Wyck, March 24, 1900. During ten years previous various steps in legislation and formation of commissions had been taken, and the names of public-spirited men who took part in those preliminaries, under circumstances of great discouragement, would make a long roll of honor. Some have not lived to see the fruition of their labor, notably Abram S. Hewitt and William Steinway. The Rapid Transit Commission, as now constituted, comprises; Alexander E. Orr, President; John H. Starin, Vice-President; Woodbury Langdon, Charles Stewart Smith, Morris K. Jesup, John Claffin; Bion L. Burrows, Secretary. Chief engineer, Wm. Barclay Parsons; Assistant, George S. Rice. Builder, John B. McDonald. The President of the construction and operating companies is August Belmont, who is in fact the financier and backer of the whole enterprise.

To these men and many of their associates New Yorkers owe a great and lasting obligation.